

# **For Reference**

---

**NOT TO BE TAKEN FROM THIS ROOM**

Ex libris  
UNIVERSITATIS  
ALBERTAENSIS











THE UNIVERSITY OF ALBERTA

MATURITY OF VOCATIONAL ATTITUDES OF  
HIGH SCHOOL STUDENTS



by

CLINTON M. LACROIX

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL, 1970





THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Maturity of Vocational Attitudes of High School Students" submitted by Clinton M. Lacroix in partial fulfillment of the requirements for the degree of Master of Education.



## ABSTRACT

This study is concerned with investigating the developmental process of 373 grade ten and grade twelve high school students with respect to maturity of attitude toward vocational choice, using the Attitude Scale of the Vocational Development Inventory, Form IV (Crites, 1965a). The relationships between vocational maturity and variables associated with the developmental process were also explored with correlational techniques.

Grade twelve students scored significantly higher on the Attitude Scale than did grade ten students, girls scored higher on the Attitude Scale than did boys, and students taking a university entrance program scored higher than did students taking a nonuniversity entrance program. Those scoring higher were deemed to be the more mature in attitude toward vocational choice.

A positive relationship was found between maturity of attitude toward vocational choice and age, academic achievement, intelligence, and level of vocational choice for the total sample. No relationship was found between maturity of attitude toward vocational choice and socio-economic status.



DEDICATION

to

Barb and Lea



## ACKNOWLEDGEMENTS

The author offers sincere thanks to Dr. E.L. Eberlein and Dr. L. Keim for their help and encouragement. Thanks are also extended to the teachers and students of O'Leary High School who participated in this study.





# TABLE OF CONTENTS

CHAPTER		PAGE
I	INTRODUCTION . . . . .	1
	Background to the Problem . . . . .	2
	Statement of the Problem . . . . .	3
	Importance of the Study . . . . .	6
	Questions to be Investigated . . . . .	7
II	RELATED LITERATURE . . . . .	9
	Vocational Maturity . . . . .	14
	Objectives . . . . .	14
	The Attitude Test . . . . .	15
	Related Studies . . . . .	15
III	PROCEDURES AND METHODS . . . . .	22
	Procedures . . . . .	22
	Data Collection . . . . .	22
	Samples . . . . .	22
	Limitations of the Study . . . . .	23
	Definition of Terms . . . . .	24
	Measuring Vocational Maturity . . . . .	24
	Method . . . . .	25
	The Instrument . . . . .	25
	Reliability . . . . .	27
	Validity . . . . .	27



	California Short Form Test of Mental Maturity . . . . .	29
	Social Position . . . . .	29
	Academic Achievement . . . . .	31
	Level of Vocational Choice . . . . .	31
IV	STATISTICAL ANALYSIS AND RESULTS . . . .	33
	Definition of Terms in Operational Form . . . . .	33
	Selection of Subjects . . . . .	34
	Statistical Analysis . . . . .	34
	Results . . . . .	38
	Question 1 . . . . .	38
	Question 2 . . . . .	42
	Questions 3, 4, 5, and 7 . . . . .	49
	Question 6 . . . . .	55
	Question 8 . . . . .	55
V	SUMMARY, CONCLUSIONS, AND IMPLICATIONS .	63
	Summary . . . . .	63
	Conclusions . . . . .	64
	Discussion and Implications . . . . .	65
	SELECTED REFERENCES . . . . .	74
	APPENDICES . . . . .	78



# LIST OF TABLES

TABLE		PAGE
1	NUMBERS OF STUDENTS TAKING PART IN THE STUDY BY SEX, GRADE, AND PROGRAM . . . . .	35
2	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL GRADE TEN AND GRADE TWELVE STUDENTS COMBINED BY GRADE AND PROGRAM . . . . .	39
3	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL MATRICULATION AND TOTAL NONMATRICULATION STUDENTS . . . . .	40
4	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL BOYS AND TOTAL GIRLS . . . . .	41
5	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE BOYS AND GRADE TEN BOYS IN THE MATRICULATION PROGRAM . . . . .	43
6	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE GIRLS AND GRADE TEN GIRLS IN THE MATRICULATION PROGRAM . . . . .	44
7	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE BOYS AND GRADE TEN BOYS IN THE NONMATRICULATION PROGRAM . . . . .	45
8	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE GIRLS AND GRADE TEN GIRLS IN THE NONMATRICULATION PROGRAM . . . . .	46
9	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL BOYS AND TOTAL GIRLS IN GRADE TEN . . . . .	47



10	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL BOYS AND TOTAL GIRLS IN GRADE TWELVE . . . . .	48
11	CORRELATIONS BETWEEN MATURITY OF VOCATIONAL ATTITUDE (VDI) AND AGE, INTELLIGENCE, ACHIEVEMENT, SOCIO-ECONOMIC STATUS, AND LEVEL OF VOCATIONAL CHOICE FOR ALL STUDENTS USED IN THE STUDY . . . . .	50
12	CORRELATIONS BETWEEN MATURITY OF VOCATIONAL ATTITUDE (VDI) AND AGE, INTELLIGENCE, ACHIEVEMENT, SOCIO-ECONOMIC STATUS, AND LEVEL OF VOCATIONAL CHOICE FOR BOYS AND FOR GIRLS . . .	52
13	CORRELATIONS BETWEEN MATURITY OF VOCATIONAL ATTITUDE (VDI) AND AGE, INTELLIGENCE, ACHIEVEMENT, SOCIO-ECONOMIC STATUS, AND LEVEL OF VOCATIONAL CHOICE FOR GRADE TEN MATRICULATION BOYS AND GRADE TEN NONMATRICULATION BOYS . . .	53
14	CORRELATIONS BETWEEN MATURITY OF VOCATIONAL ATTITUDE (VDI) AND AGE, INTELLIGENCE, ACHIEVEMENT, SOCIO-ECONOMIC STATUS, AND LEVEL OF VOCATIONAL CHOICE FOR GRADE TEN MATRICULATION GIRLS AND GRADE TEN NONMATRICULATION GIRLS . .	54
15	DIRECTION OF CHANGE IN PROGRAM TAKEN BY GRADE TWELVE STUDENTS SINCE FIRST REGISTERING IN GRADE TEN . . . . .	56
16	NUMBERS OF STUDENTS BY GRADE AND SEX EXPRESSING A VOCATIONAL CHOICE AND THOSE NOT EXPRESSING A VOCATIONAL CHOICE . . . . .	57
17	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TEN BOYS WHO EXPRESSED A VOCATIONAL CHOICE AND THOSE WHO DID NOT . . . . .	59
18	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TEN GIRLS WHO EXPRESSED A VOCATIONAL CHOICE AND THOSE WHO DID NOT . . . . .	60







19	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE BOYS WHO EXPRESSED A VOCATIONAL CHOICE AND THOSE WHO DID NOT . . . . .	61
20	T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE GIRLS WHO EXPRESSED A VOCATIONAL CHOICE AND THOSE WHO DID NOT . . . . .	62



## CHAPTER I

### INTRODUCTION

During particular stages in the educational sequence of each child, he is faced with the problem of making certain educational decisions which, to a great extent, determine the path he will follow in future educational endeavors and the particular vocations which will be open to him.

The question whether emphasis should be put on a goal oriented approach or a developmental approach in the preparation of students for future careers is a point of debate among some educators. Also, in direct relation to this is the question: should students, at such an early stage as grade nine, be required to make definite educational plans in the way of specific high school program choices which will determine their future career and way of life? It is generally agreed that the whole education process should be concerned with preparing the child for the educational and vocational decisions he will have to make sometime. However, the question is, when should the child be required to make these decisions? Also, how flexible can the education



system be to allow for changing plans and goals on the part of the students?

This study is intended to investigate the difference, if any, in the level of attitude toward vocational choice among students of different grade levels and to investigate the relationships of some variables associated with vocational maturity.

### Background to the Problem

In our present education system, students at the grade nine level are required, toward the end of the school year, to plan and register in their future high school program of studies. Through all their previous schooling these students followed a prescribed course of studies. Upon entering grade ten however, students are faced with the task of selecting a course of studies prescribed by certain programs which lead to, and in most cases limits the students to, possible future educational and vocational opportunities.

Programs offered differ in different schools. Generally programs include all or a combination of matriculation (university entrance), general, business, vocational, and special vocational. The school in which this study was conducted offers matriculation, business, and general programs. The general program, depending upon the particular courses that are taken,



can give students the necessary prerequisites for entry to The Northern Alberta Institute Of Technology or similar institutions elsewhere. Within the business program, students can follow routes leading to either clerical or secretarial training. In effect then, this school has five possible alternatives from which a grade nine student must choose, depending upon what he has 'planned' for his future way of life.

#### Statement of the problem

In many instances, the selection of a suitable grade ten program poses a major problem to grade nine students. Most students at this level are not fully aware of content of courses they are expected to select, where each leads, and the possible limitations set by some. If proper choices are to be made, information of this nature must be made available to students (Erickson, 1947).

In attempting to make a choice that is best for him, a student has the problem of being able to recognize his capabilities, interests, and aptitudes as well as establish a goal in the form of a future career. In most cases, students are expected to make decisions for which they are not prepared. In effect, "letting them choose is giving them a pseudo-choice for they are without the power of discretion (Ginsberg, 1965)." The fact that





students at this level have many conflicts which influence decision-making is supported by Dressel (1947) who states,

The choice of program at this point is a difficult one for the immature adolescent, since there is apt to be considerable conflict engendered by the interaction of: 1. The attitude of parents toward education: 2. The prestige implications of college education: 3. Financial status: 4. The student's interests: 5. Intelligence and aptitudes of the student: 6. The student's past achievement: 7. The student's immaturity: 8. The student's vocational goals (p. 211).

The fact that students are required to make decisions such as these at this level is questioned by others as well. Gribbons (1964) suggests a delay in requiring youth to make choice of programs. Disagreement with the goal oriented approach is also expressed by Wurtz (1966). He regards this type of approach as an attempt to manipulate the developmental process in order to achieve a preconceived goal. On the other hand, O'Hara (1968) discusses the lack of goal orientation. He suggests for increased understanding of the world of work on the part of students, guidance personnel have the obligation to create goal directedness.

Career decision-making, according to Katz (1963), is "... prompted by the cultural (educational-occupational) system, which requires a decision and yet



establishes or maintains some discrepancy between the student's present state of knowledge or wisdom and the necessary or desirable state for effective decision-making ...(p.16)."

Super (1961) maintains that,

Having a vocational objective is important in a society in which earning a living is important, in which occupational roles are of major significance, and in which education is, in effect if not avowedly, occupationally oriented: having a vocational preference, in this context, gives purpose to behavior and makes possible educational and vocational decisions (p.35).

For the average student, the primary decision is whether to follow a university entrance or nonuniversity entrance program. If he chooses the former, he still has a further decision to make. That is, the selection of particular courses on the matriculation program that will lead to a particular faculty and hence a particular field of study. If he elects a nonuniversity entrance program then he must make his selection from the alternatives open to him at the time, each one leading to a particular career or group of careers. In either case, the student is called upon to make a decision which will, to a great extent, determine the avenues open to him in the future.



### Importance of the Study

Since it is necessary to more fully understand the developmental process in educational and vocational decision-making, more studies should be conducted to investigate the factors affecting this process (Holland, 1959). Although there have been many studies conducted on the developmental process, Crites and Semler (1967) suggest more studies on the interrelationships among the various dimensions of this process.

If decision-making readiness in the educational-vocational process is to be viewed as being developmental (Crites and Semler, 1967; Wurtz, 1966; Henderson, 1969), then it is reasonable to assume that students gain in educational and vocational maturity (greater self knowledge, and knowledge about education and its relationship to future vocations) and as they do they are better able to formulate plans and set more realistic goals (Holland, 1959).

It is important then to take a closer look at the developmental process with respect to educational and vocational planning. One way of doing this is to investigate the vocational maturity of students at different grade levels within high school as well as investigate the interrelationships of some variables





associated with vocational maturity and the developmental process.

### Questions to be Investigated

Since the developmental approach to educational and vocational planning means that students will 'grow' in their ability to look more realistically at the problem of decision-making, then it is reasonable to suspect that students' level of vocational maturity will increase throughout their years in high school. Therefore, the following questions will be investigated in this study:

1. How does the level of maturity of attitude toward vocational choice differ between students in grade ten and students in grade twelve with respect to program and sex?
2. How does the level of maturity of attitude toward vocational choice differ between boys and girls in the same grade?
3. What is the relationship between level of vocational maturity and achievement for students in the same program?
4. What is the relationship between level of vocational maturity and measured intelligence?

Although students from low socio-economic families may aspire to a higher status through choice of a career, students from families of higher status will have many more doors open to them both financially and opportunity wise (Miller and Form, 1951). Therefore,





socio-economic status could have an effect on a student's attitude toward selecting a future career. Therefore,

5. What is the relationship between level of maturity of attitude toward vocational choice and socio-economic status?

Since some students do change programs during high school which may be a result of thinking about themselves and careers more realistically (Crites and Semler, 1967),

6. At the grade twelve level, what is the relationship between the proportion of boys that change programs to the proportion of girls that change? In what direction does most change take place? (i.e. matric to general, general to matric, matric to business, etc.).

Since level of attitude toward vocational choice should have some bearing on a student's expressed vocational choice,

7. What is the relationship between level of maturity of attitude toward vocational choice and expressed vocational choice with respect to grade, sex, and program?
8. How does the level of maturity of attitude toward vocational choice differ between students who have expressed a vocational choice and those who are undecided (did not express a vocational choice)?



## CHAPTER II

### RELATED LITERATURE

With the ever increasing trend for students to stay in school longer, the responsibility rests on the education system, more so than ever before, to offer programs of greater flexibility (easier mobility between programs with little loss of credit) to meet the changing needs and plans of students. With the many courses available to students at the high school level, each possibly leading to a different type of career, decision-making becomes exceedingly important. Katz (1963) discusses the expectations of our culture, particularly our education system, in requiring youth to make important educational decisions both upon entering and again upon leaving high school. He refers to these periods as the first and second major choice points in a student's development.

As a student progresses through school, and gains in knowledge about himself and knowledge of what is to come after school, his chances of making more accurate decisions increase as does his chance of making more realistic decisions (Holland, 1959; Gribbons and Lohnes, 1965).



Ginsberg and Herma (1964) stated, "through the courses which he likes and those which he finds uninteresting or boring and which he comes to reject, the young person begins to learn a little about his interests (p.49)." In other words, self concepts, and aptitudes and their relation to work are clarified as students pass through grades ten to twelve and gain in experience and knowledge (Astin, 1968). In this respect then, we can view development as, "... an evolution by sequential stages resulting from growth and learning (Wurtz, 1966, p.127)."

In reference to abilities, aptitudes and interests, Roe (1964) said, "... they all develop in the interplay between generic endowment and personal experience and between one another (p.197)."

As a student advances in grades through high school, he begins to take a more realistic view of what he is able to accomplish educationally and vocationally (Hollender, 1967; Ginsberg, Ginsberg, Axelrod and Herma, 1964; Gribbons and Lohnes, 1965).

Cass and Tiedeman (1960) pointed out that the adolescent, in considering the selection of programs and courses available to him in the form of educational and vocational offerings, stands on the threshold of awareness of identity and responsibility for self.





They further stated,

Youth are little aware of aptitudes as they enter high school: the parental influence is not usurped: the freedom to choose, to err, and to learn for one's self still exists. Youth still ignor potential because their information, progress, experience and resulting orientations do not permit it's considerations (p.544).

Holland (1959) suggested that as students gain in knowledge they make choices more in terms of what they see themselves as being able to become. He said "adequacy of choice is in part a function of age, since time alone provides more learning opportunities for the accumulation of knowledge (p.41)." Wrenn (1962) also supports the opinion that choices made regarding a vocation are attempts on the part of students to "... find a vocational environment which will contribute to the kind of person he wishes to become (p.128)."

The educational-vocational development of an adolescent is an important part of his overall developmental process. It is, in effect, self development viewed in relation with choice, entry and progress in both educational and vocational careers (Tiedeman, 1961). Decision-making is an ongoing process. Tiedeman (1961) said that vocational development "... not only occurs within the context of a single decision; vocational development ordinarily occurs within the context of several decisions (p.18)."





Havinghurst (1953) defined a developmental task as one,

which arises at or about a certain period in the life of an individual, successful achievement of which leads to his happiness, and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks (p.2).

Wurtz (1966) pointed out that "the individual in his development develops bit by bit. Each stage in his development not only has bearing upon, but indeed is, the basis of each succeeding stage (p.127)." He further suggested that vocational choice "... is not a choice made at a point in time, but rather is a long ongoing process (p.127)."

If educational and vocational decision-making is to be viewed as an integral part of the whole developmental process of an individual, and if students are given the opportunity to relate what they are doing in the classroom to future aspirations, then greater self knowledge will be realized (Ginsberg and Herma, 1964).

O'Hara (1968) suggests career development is a process and students are engaged in this process. He said, "... subject matter in school is either directly or indirectly related to their career development (p.636)." If this is so, then all teachers must take part in relating what they are doing in the classroom



to future plans of students. That is, teachers must be aware of their part in the career development of students (Roeber, 1965).

The need for relating school work to future careers is also supported by Vriend (1969) who stressed the use of activities in the classroom as well as some curricular modifications which more closely relate class work to vocations. He said, "a program which integrates vocationally related knowledge and activities into the total educational experience can positively modify and influence maturity of vocational development (p.382)."

Giving students relevant educational and vocational information on the assumption that this is all that is needed for proper decision-making is not enough (Thoresen and Mehrens, 1967). That is, both educational and vocational information must be meaningful to students. In decision-making, the methods used in identifying relevant information and the ways in which it is processed can provide an important source for explaining the basis of the choice itself (Halpern and Norris, 1968). In their survey, Remers and Radler (1957) found that generally students expressed their desire for more opportunity in school to learn about such things as careers, abilities and interests.



### Vocational Maturity

The concept of vocational maturity, as stated by Crites (1965a), "... is more comprehensive than vocational choice ... (p.4)." He further maintains that vocational maturity incorporates attitudes toward decision-making, comprehension and understanding of job requirements, planning activity, ability, and the development of vocational capabilities as well as the selection of an occupation. Since few measures of vocational maturity are in existence, and those that do exist suffer from serious shortcomings (Crites, 1965a), "the Vocational Development Inventory has been conceived and constructed to measure more completely than previous procedures the behavior domains of choice competencies and attitudes in vocational maturity ... (Crites, 1965a, p.7)."

Objectives. The basic objective in the development of the Vocational Development Inventory was to construct and standardize a measuring procedure which would operationally define one of the more potentially useful concepts in the various theories of vocational development (Crites, 1969). He said, "... the concept of vocational maturity was selected as the one which appeared to have the greatest promise for further definition and measurement (p.5)."





The Attitude Test. The Attitude Scale, as stated by Crites (1965a) is, "... an empirically constructed scale which assesses verbally stated vocational behaviors that presumably mature as the individual grows older and progresses through the education system (p.82)."

The Attitude Test of the Vocational Development Inventory consists of 50 True-False statements about (1) involvement in the vocational choice process, (2) orientation to the world of work, (3) independence in decision-making, (4) preferences for sources of job satisfaction, and (5) conceptions of choice and work (Crites, 1969). A student identifies the item as either 'true' or 'false' and receives a vocational maturity score based upon how many items he answered in the same way as grade twelve students who were used by Crites as the criterion group for empirically deriving the scoring key.

#### Related Studies

Crites (1969) reports approximately 100 studies of various aspects of the Attitude Scale have been undertaken since its initial standardization.

Crites and Semler (1967) conducted a survey to investigate the relationship of adjustment, educational achievement, and vocational maturity (using the Attitude Test of the Vocational Development Inventory) as





dimensions of development in adolescence. Results indicated that there is a positive correlation between adjustment and vocational maturity and educational achievement. That is, the better adjusted student was also the most vocationally mature.

Asbury (1968) found an  $r$  of .34 ( $p < .01$ ) between vocational maturity scores and the Stanford Achievement Tests. Further studies have shown a positive relationship between intelligence and various aspects of vocational maturity (Crites, 1969). This is supported by Super and Overstreet (1960) who found that the more intelligent boys did have a slight tendency to think more about career choices they needed to make and to accept more responsibility for choice and planning. Crites (1969), in his findings comes to the conclusion that, "... it is well established that although vocational maturity is related to variables that are non-intellective ... it is also significantly associated with intellective ones (p.55)."

In a study of male and female Manpower Development trainees, using the Attitude Scale of The Vocational Development Inventory, Bartlett (1968) reported a positive relationship between the maturity of vocational attitude and self-confidence, achievement, autonomy and dominance. He concluded that the high scorers on



the Attitude Scale are more assertive, persistent, goal oriented, forceful, and independent.

Crites (1969) reported on findings by J. W. Harris (1966) who, in a Doctoral study, found that students who remained in school as opposed to those who dropped out of school were more vocationally mature, as measured by the Attitude Scale. A further study reported by Crites (1969) was a Master's thesis by J. W. Hollender (1964) where it was found that students who were consistent in their choice from one year to the next, who had made choices, and who were realistic in their choices generally had significantly higher mean scores on the Attitude Scale regardless of their aptitude level.

Gribbons (1964) investigated changes in readiness for vocational planning RVP from the eighth to tenth grades. His study was concerned with the ability of students to deal effectively with crucial educational and pre-vocational decisions they must make in the eights and tenth grades. His findings show that RVP increases from the eighth to the tenth grades. It was also found that some students in grade eight were more advanced and more ready to make vocational decisions than were some grade ten students. This indicates, as stated by Gribbons, the need for early identification



of students with low RVP. This is supported by the fact that he also found some grade ten students who made decisions based upon information that was irrelevant and often inaccurate. These students scored lower on the RVP than did grade eight students. Crites (1969) regards Gribbon's RVP scale as having some shortcomings mainly in the way data is collected on students' readiness.

Whereas Crites' measure of maturity is based upon scores obtained on a standardized paper-and-pencil inventory, Gribbons' measurement is based upon data collected by means of a multidimensional interview administered to pupils. Crites' primary objection is the Gribbons' approach cannot be scored as objectively and cannot be administered to large samples conveniently (Crites, 1969).

The question whether or not it is good for students to have to make educational-vocational decisions in the early grades seems to be open to debate among many educators. The fact that this type of decision is made while students are still in the classroom "... under the impersonal pressure of the curriculum" is of concern to Caplow (1954). He makes the point that students at this stage are remote from the reality of work.

Halpern and Norris (1968) maintain that the





salience of curriculum choice at this stage for students is heightened by several factors. They said, "it is real, it has direct implications for the immediate future, it affects later occupational entry, and it plays an important part in vocational development (p.240)."

Katz (1963) supports the view that decision-making at this level can, "... be an important learning experience for students, helping them to develop their self-concepts and to formulate hypotheses for reality testing (p.32)." He is also of the opinion that the importance of the curriculum decision cannot be attributed solely to its direct, intrinsic effect on careers.

Dressel (1947) stated, "choice of program at the grade nine level is difficult for the immature adolescent, since there is apt to be considerable conflict ... (p.211)."

Educational and vocational decision-making can be a major problem for students in the higher grades and university as well as for those entering high school, since, "... chronological maturity does not imply necessary vocational development (Hershenson, 1968, p.24)."

The need for experience to foster the developmental process seems to be generally accepted among





educators, and the school is the main source for this experience (Super, 1957). That is, in our present culture, the school has taken over the responsibilities of many of the functions formerly exercised by the home (Super, 1957). "... it is obvious then, that the school is the adolescent exploratory institution par excellence (Super, 1957, p.85)." This, then, puts the responsibility on the school to create in the individual the ability to profit and grow personally from vocational experience (Ivey and Morrill, 1968). These authors further stated,

Those searching for a career should be seen not as individuals hunting for a place in a stable society, but as changing organisms in a series of career related developmental tasks that enable them to adapt themselves to a changing society (p.645).

In our present education system, educational decisions, which affect future careers, must be made as early as the ninth grade. Because of this, some knowledge of the vocational maturity of students is important as well as knowledge of certain other variables that may be related to students' attitude toward educational-vocational decision-making. If a student goes through high school in a particular program then finds the courses he has taken are not suitable for entry into a newly chosen field, then, "... time is wasted because of previous unwise educational choices



(Super and Overstreet, 1960, p.11)." The problem then is, "... what can be done to increase readiness for decision-making among those who are not ready (Super and Overstreet, 1960, p.11)."

When dealing with the question of decision-making, an important consideration to be kept in mind is the fact that both education and the world of work are changing at a rapid pace (Wurtz, 1966; Miller, 1964). A dramatic social and technological transformation has altered the structure and style of work and, in some respects, its meanings (Borow and Wrenn, 1964). Wurtz (1966) cautions that our concern with goals might be causing students to select inappropriate goals simply to have a goal. As well, he said, "pupils can, however, only select goals that are known' such goals are those of today's world, not tomorrow's (p.130)."

In reference to the developmental approach, Wurtz (1966) stated,

This procedure deals with the immediate future on the basis of the present in contrast with the goal oriented approach which requires planning for the next three or four years on the basis of an objective presumable to be attained following this period (p.129).



## CHAPTER III

### PROCEDURES AND METHODS

#### Procedures

Data Collection. Data for this study will be collected by means of a questionnaire and the Attitude Test of the Vocational Development Inventory. These will be administered to high school students by classroom teachers under the supervision of the author. Information regarding age, grade, program, and future plans (educational and vocational) as well as information regarding father's occupation and level of education will be gained by means of the questionnaire. An answer sheet for the Attitude Test will be incorporated in the questionnaire booklet.

Data regarding students' measured intelligence and academic achievement will be taken from school records. Teachers will be instructed to explain to students the purpose of the questionnaire and Attitude Test as well as the means used in selecting students for the study.

Samples. Students will be selected from grades ten and twelve by means of tables of random numbers.





Samples will be taken from each grade independently in order to have near equal Ns. "Since tables of random numbers are expected to yield samples that possess the defining property of random sampling, samples obtained by using the tables of random numbers are considered to be random samples (Hoel, 1960, p.119)."

From a total population of 537 grade ten students, 205 will be selected randomly. The number of students to be selected will be set at more than 200 since it is unlikely that all students selected will participate. Minimum N will be set at 175.

Similarly, from a total population of 350 grade twelve students, 205 will be selected randomly with a minimum N set at 175.

#### Limitations of the Study

Since this study will be conducted within one high school, in a particular area of the city, samples will not necessarily be representative of general urban high school students. Findings of this study are generalized to this one population and school. Population of the school is made up of students from an industrial area of the city, from newly developed residential areas, and from two military stations.

As well, this will be a cross-sectional study comparing two independent samples rather than a





longitudinal study where a single group is followed up over a period of time.

### Definition of Terms

Matriculation refers to the academic program of studies which gives students entrance requirements to university.

Nonmatriculation refers to the program of studies which prepares students for fields other than university. The general and business programs are included here.

Vocational maturity is measured in terms of the Attitude Scale of the Vocational Development Inventory (Crites, 1965a). Vocational maturity level represents the degree of involvement shown by students in the process of vocational choice, their orientation toward the problem, their independence in decision-making, their preferences for factors in vocational choice, and their conceptions of vocational choice (Crites, 1969).

### Measuring Vocational Maturity

The developmental concept of educational and vocational decision-making implies a process of maturing, which takes place within each individual as he progresses through school. Choice of future careers on the part of students is most important at this stage in development since, "the process of occupational choice may be characterized as that of developing a vocational identity (O'Hara and Tiedeman, 1959, p.292)."



To further support the premise that vocational maturing takes place, O'Hara and Tiedeman (1959) also found that self concepts in the areas of interests, aptitudes, work, and general values are clarified as boys go from grade nine to twelve. Astin (1968) has shown that more than two-thirds of high school students change their career choice between the ninth grade and one year after high school. She states,

Career changes that take place during the high school years result partly from a greater self awareness and recognition by the students of the aptitudes and skills that are necessary to educational and occupational success (p.966).

In effect, the student matures vocationally and subsequently changes his plans to be more in accord with his new understanding.

### Method

The Instrument. The Attitude Test of the Vocational Development Inventory will be used to measure the level of vocational maturity of students. The Attitude Test (Crites, 1965a) was developed from a model for the measurement of vocational maturity and, "... its items had to be (1) conceptually and linguistically meaningful in terms of contemporary definitions of vocational maturity and (2) functionally and significantly related to age and/or grade groupings (p.71)."



In the construction of the Vocational Development Inventory, Crites (1965b) describes the first phase as being devoted to the construction and standardization of the Attitude Test. This is a 50 item scale consisting of statements about an adolescent's -

1. Involvement in the process of vocational choice.
2. Orientation toward the problem of vocational choice.
3. Independence in decision-making.
4. Preferences for factors in vocational choice.
5. Conceptions of vocational choice.

Crites gathered data on approximately 5000 male and female elementary and high school students from grades five through twelve. In the construction of the Attitude Test, it was found that it made little difference whether items were stated in the first or third person singular, but it did matter whether Likert-type rating scales or dichotomous True-False options were used as response formats for items, and whether age or grade was taken as the index of time in selecting items. The combination of these factors which produced the greatest number of discriminating items was a True-False scale based upon differences between grades and keyed to the responses of 12th graders for the derivation of a total vocational maturity score.





Reliability. The reliability of the Attitude Test has been appraised in two ways (Crites, 1969): (1) by computing internal consistency estimates, and (2) by determining test-retest stability coefficients. In computing the internal consistency estimates, it was found the average coefficient was .74. Crites (1969) points out it was not unanticipated to obtain estimates in the .70s. "In general, they are consistent with the substantive complexity of the scale (p.47)."

Similarly, he points out it would not be expected that the Attitude Scale would have a very high test-retest stability coefficient, "at least not as high as the .85 minimum usually considered essential for aptitude tests (p.47)." That is, since the Attitude Scale presumably is a measure of a developmental variable, which not only changes over time but also changes at different rates for different individuals, "... it would more likely be in the .70s (p.48)." The stability coefficient was found to be .71 with a standard error of measurement of 3.12. This was the finding for 1,648 students tested and retested after a one year interval.

Validity. The content validity of the Attitude Scale, as reported by Crites (1969), was investigated in an unpublished Master's thesis by D.W. Hall (1962). Hall had ten expert judges (all counselling psychologists) answer each of the items on the scale in what





they considered to be the vocationally mature position. Of the 50 items, the judges agreed with the scoring key 37 times, including all the items which are scored as true. This represents 74 percent agreement between judges and the key. "Thus, the Attitude Scale would appear to have acceptable "content" validity ... (Crites, 1969, p.50)."

Crites (1969) also reports that Hall's study showed that the items on which the judges disagreed with the scoring key seemed to reflect their values as counselling psychologists. That is,

They answered the following items True whereas they were keyed False: "If I can just help others in my work, I'll be happy", "Choose an occupation which gives you a chance to help others", and "I want to really accomplish something in my work -- to make a great discovery or earn lots of money or help a great number of people". In addition to their social service values manifested in these statements, they also revealed their vocational indecisiveness, not an uncommon reason for entering the field of counselling: "I don't know what courses I should take in school", "I can't understand how some people can be so set about what they want to do", and "I keep changing my occupational choice". (p.50).

Crites (1969) concludes that it is well established that individual differences in the maturity of vocational attitudes "... can be objectively and reliably measured with the Attitude Scale of the Vocational Development Inventory... (p.70)."



California Short-Form Test of Mental Maturity

(CTMM) scores taken from students' cumulative records will be used as measured intelligence scores for this study. Since CTMM tests have been used by the schools in the Edmonton Separate School System, and since the CTMM's measurement is acceptable (Cronbach, 1960), IQ scores on this test will be used. As well, since the CTMM incorporates a nonverbal test as well as a verbal test, this provides a better measurement of general ability (Goldman, 1961).

The CTMM consists of seven tests which sample various kinds of mental processes to establish the level and rate of mental development. They include a verbal score, a nonverbal score, and a total score.

The rate and scope of mental development are measured in terms of four statistically derived factors: (1) spatial relationships, (2) logical reasoning, (3) numerical reasoning, and (4) verbal concepts (Sullivan, Clark, and Tiegs, 1957).

Social Position. The Two-Factor Index of Social Position (Hollingshead, 1965) will be used to establish the socio-economic level of student's families. Hollingshead and Redlich (1958) devised a three factor index which was based upon the father's occupation, his level of education, and the location and type of home



in which the family lives. However, "because of difficulty in obtaining residential information where adequate ecological maps do not exist, a two-factor variation of the index of social position has been used widely (Bonjean, Hill and McLemore, 1967, p.384)."

The two-factor index utilizes the occupational and education factors only. The educational scale is based upon the years of school completed by the head of the household while the occupational scale is based upon type of employment which incorporates the degree of responsibility associated with the occupation.

Years of school completed is divided into seven categories with each given a scale value ranging from 'one' for holders of higher degrees to 'seven' for those with less than seven years schooling. This scale is given a factor weight of 'four'. (See appendix).

The occupational scale incorporates seven levels with the 'higher' level occupations receiving a scale value of 'one', and the 'lower' level occupations a scale value of 'seven'. This scale is given a factor weight of 'seven'. (See appendix).

The Index of Social Position score is obtained by adding the products of scale score and factor weight for education and occupation. The family is then placed in one of four classes according to where its





total score falls within a range of scores established for each class.

Academic Achievement. The score for students' academic achievement is obtained by taking the average of the subject marks received by students as a result of Christmas examinations. In the case of matriculation students, core subjects are generally the same for all students. Therefore, the average for each student is regarded as representative of academic achievement for this group. Similarly, since nonmatriculation students include those in the general and business programs, taking subjects regarded as less difficult than those of the matriculation program, the average of subject marks will be used as representative for this group.

Level of Vocational Choice. Roe's Two-Way Classification of Occupations (1956) will be used to classify students' level of expressed vocational choice. In her system, Roe classified occupations into six levels and eight groups. The six levels range from professional and higher managerial positions at level 'one', to the unskilled occupations at level 'six'.

Classification into level depends upon the degree of individuals' personal autonomy and the degree of skill and training required. Group divisions indicate the area of activity such as 'service', 'technical',





'outdoor', etc.

Crites and Semler (1967) used Roe's classification in their study where they retested a group of students who had been tested by Semler seven years previously when they were in grade five. They found an  $\underline{r}$  of .53 ( $p < .01$ ) for level of vocational choice. This was lower than expected and, "may indicate considerable shifting in career goals by high school seniors, possibly in a more realistic direction ... (p.494)." They also found a negligible correlation between level of vocational choice and level of vocational maturity (using the Attitude Scale) for grade twelve students tested in the fall of 1963 and retested in 1964. The  $\underline{r}$  was .16 ( $p < .01$ ).



## CHAPTER IV

### STATISTICAL ANALYSIS AND RESULTS

This chapter represents the culmination of findings of the questions under investigation. Since a number of variables were investigated, these variables are described in operational terms followed by a restatement of the questions under investigation and findings obtained.

#### Definition of Terms in Operational Form

The primary question under investigation in this study is concerned with the level of vocational maturity of students at different grade levels in high school.

The level of vocational maturity assigned students is their score obtained on the Attitude Test of the Vocational Development Inventory (VDI). Academic achievement (Ach), is the average obtained by students as a result of their Christmas (mid-term) examinations. Intelligence (IQ) is the score obtained on the California (Short-Form) Test of Mental Maturity. Socio-economis status (SES) refers to the level assigned students' families by means of Hollingshead's Two-Factor Index of Social Position. Roe's Two-Way Classification of Occupations is used to classify level



of students' expressed vocational choice (LVC).

### Selection of Subjects

From a total population of 537 grade ten students, 205 were selected randomly to take part in this study. Due to incomplete information, absences, or the fact that some students dropped out of school between the time selection was made and the questionnaire was administered, a final N of 193 grade ten students was realized.

Out of a total population of 350 grade twelve students, 205 were selected randomly. A final N of 180 grade twelve students were obtained for the study.

Both Ns were well above the minimum of 175 set for each sample. Table 1 shows a breakdown of numbers of students by grade, sex, and program used in this study.

### Statistical Analysis

In this study, a number of statistical analyses were applied. The t-test was used to determine if a significant difference exists between VDI mean scores for questions 1, 2, and 8. These questions are restated in operational terms:



TABLE 1

NUMBERS OF STUDENTS TAKING PART IN THE STUDY  
BY SEX, GRADE AND PROGRAM.

	Grade X		Grade XII		Total
	Matric	Nonmatric	Matric	Nonmatric	
Boys	70	20	53	32	175
Girls	57	46	57	38	198
Total Ns	127	66	110	70	373
Total students in grade	537		350		





1. How does the VDI differ (if at all) between students in grade ten and students in grade twelve? How does the VDI differ with respect to program and sex?
2. How does the VDI differ between boys and girls within grades?
8. How does the VDI differ between students who have expressed a vocational choice and those who are undecided (did not express a vocational choice)?

Since the t-test assumes homogeneity of variance (Ferguson, 1959), the F-test was applied to determine whether or not a significant difference exists between variances for each pair of means being compared. In all but one case no significant difference between variances was found to exist. Therefore, the t-test was accepted as a test of significance for this study.

The one instance where there was a significant difference between variances occurred in the comparison of VDI means for grade ten students who had made a vocational choice, and grade ten students who had not made a vocational choice (question 8). In this case, the method proposed by Welch (described by Ferguson, 1959) was used. This method makes an adjustment in the number of degrees of freedom when unequal variances



are involved.

For questions 3, 4, 5, and 7, correlations were calculated to determine the relationship among variables under consideration. These questions are restated in operational terms:

3. What is the relationship between VDI and Ach for students in the same program?
4. What is the relationship between VDI and IQ?
5. What is the relationship between VDI and SES?
7. What is the relationship between VDI and LVC with respect to grade, sex, and program?

The Chi Square test of significance was used for question 6 to test for significance of difference between proportion of boys changing type of program to that of girls changing programs. Question 6 is restated in operational terms:

6. At the grade twelve level, what is the relationship between the proportion of boys changing type of program during high school to that of girls changing program? In what direction does most change take place?



## Results

Question 1. This question was primarily concerned with comparing mean scores on the Attitude Test of the Vocational Development Inventory of grade twelve students and grade ten students.

In testing the difference between VDI means for total grade twelve students and total grade ten students, a significant difference was found to exist between the two means (table 2).

When students were compared with respect to type of program, it was found that matriculation students scored significantly higher on the Attitude Test than did nonmatriculation students (table 3).

Similarly, when comparing the VDI mean scores with respect to sex, it was found that girls scored significantly higher than boys indicating that girls are more vocationally mature than boys of comparative age and grade levels (table 4).



TABLE 2

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL GRADE TEN AND GRADE TWELVE STUDENTS COMBINED BY GRADE AND PROGRAM.

	Total grade ten students N = 193	Total grade twelve students N = 180	t	p
VDI mean	34.33	38.04	-7.73	.000





TABLE 3

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL MATRICULATION STUDENTS AND TOTAL NONMATRICULATION STUDENTS.

	Matriculation students N = 237	Nonmatriculation students N = 136	t	p
VDI mean	36.72	35.07	3.10	.002



TABLE 4

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL BOYS AND TOTAL GIRLS.

	Total boys N = 175	Total girls N = 198	t	p
VDI mean	34.82	37.27	-4.86	.000



Statistical analysis showed that for comparisons of all combinations of students' VDI means (by sex, grade, and program) significant difference occurred in all cases.

Matriculation boys in grade twelve had a significantly higher mean score on the VDI than did grade ten boys in the same program (table 5). Similarly, grade twelve matriculation girls scored significantly higher than did grade ten girls in the same program (table 6).

Nonmatriculation boys in grade twelve scored higher on the VDI than did grade ten boys in the nonmatriculation program (table 7). As well, nonmatriculation girls at the grade twelve level scored higher than did grade ten girls in the same program (table 8).

Question 2. This question is also concerned with comparing mean scores on the Attitude Test of the Vocational Development Inventory. However, these comparisons are between boys and girls in the same grade and program. That is, grade ten girls scored significantly higher on the VDI than did grade ten boys (table 9). Similarly, grade twelve girls scored higher than did grade twelve boys (table 10).



TABLE 5

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE BOYS AND GRADE TEN BOYS IN THE MATRICULATION PROGRAM.

	Grade ten boys N = 70	Grade twelve boys N = 53	t	p
VDI mean	33.70	37.66	-4.79	.000





TABLE 6

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE GIRLS AND GRADE TEN GIRLS IN THE MATRICULATION PROGRAM.

	Grade ten girls N = 57	Grade twelve girls N = 57	t	p
VDI mean	36.35	39.93	-4.31	.000



TABLE 7

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE BOYS AND GRADE TEN BOYS IN THE NONMATRICULATION PROGRAM.

	Grade ten boys N = 20	Grade twelve boys N = 32	t	p
VDI mean	31.65	34.56	-2.31	.025



TABLE 8

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR GRADE TWELVE GIRLS AND GRADE TEN GIRLS IN THE NONMATRICULATION PROGRAM

	Grade ten girls N = 46	Grade twelve girls N = 38	t	p
VDI mean	33.93	38.68	-5.43	.000



TABLE 9

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL BOYS AND TOTAL GIRLS IN GRADE TEN.

	Total grade ten boys N = 90	Total grade ten girls N = 103	t	p
VDI mean	33.24	35.27	-2.98	.003





TABLE 10

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT INVENTORY FOR TOTAL BOYS AND TOTAL GIRLS IN GRADE TWELVE.

	Total grade twelve boys N = 85	Total grade twelve girls N = 95	t	p
VDI mean	36.49	39.43	-4.66	.000



Since questions 3, 4, 5, and 7 are all concerned with the relationship between VDI and other variables that possibly affect vocational maturity, results for all four questions are reported together.

Questions were investigated by first looking at both samples of students combined; secondly, all boys from both samples combined; and thirdly, all girls from both samples combined. Correlations were then calculated for the different groups according to sex, grade, and program.

Group 1. Students in this group comprised all students taking part in the study (N=373).

Findings showed significant correlations between maturity of vocational attitude and age, intelligence, achievement, and level of vocational choice.

Results showed a negative correlation between maturity of vocational attitude and socio-economic status. ( $\underline{r} = -.14$ ) Table 11.

Group 2. This group was made up of all boys taking part in the study (N=175).

For this group, significant correlations were found between maturity of vocational attitude and age, intelligence, and achievement (Table 12).



TABLE 11

CORRELATIONS BETWEEN MATURITY OF VOCATIONAL ATTITUDE (VDI) AND AGE, INTELLIGENCE, ACHIEVEMENT, SOCIO-ECONOMIC STATUS, AND LEVEL OF VOCATIONAL CHOICE FOR ALL STUDENTS USED IN THE STUDY.

---

	VDI	p
<hr/>		
AGE	$\underline{r} = .27$	.000
IQ	.14	.015
Ach	.23	.000
SES	-.14	.012
LVC	.15	.005

---

N = 373



Group 3. This group includes all girls taking part in the study (N=198). Results showed significant  $r$  between maturity of vocational attitude and age, intelligence, and achievement (table 12).

In both cases (for boys and for girls)  $r$  between maturity of vocational attitude and level of vocational choice was not significant. As well, in both cases results showed a negative  $r$  between maturity of vocational attitude and socio-economic status.

Group 4. This group was made up of grade ten matriculation boys (N=70). (table 13).

Results showed a significant correlation between maturity of vocational attitude and achievement only. Similarly, for group 5, which was made up of grade ten nonmatriculation boys, correlations were significant only between maturity of vocational attitude and level of vocational choice (table 13).

Group 6. Students in this group included only grade ten matriculation girls (N=57). (table 14).

Calculations for this group showed no significant correlation between maturity of vocational attitude and other variables. However, for group 7, made up of grade ten nonmatriculation girls, results showed a significant  $r$  between maturity of vocational attitude and level of vocational choice (table 14). For all grade twelve students, no significant correlations were found.





TABLE 12

CORRELATIONS BETWEEN MATURITY OF VOCATIONAL ATTITUDE (VDI) AND AGE, INTELLIGENCE, ACHIEVEMENT, SOCIO-ECONOMIC STATUS, AND LEVEL OF VOCATIONAL CHOICE FOR BOYS AND FOR GIRLS.

		Boys		Girls	
		VDI	p	VDI	p
AGE	$\underline{r} =$	.30	.000	.28	.000
IQ		.18	.027	.22	.007
Ach		.21	.006	.15	.032
SES		-.12	.123	-.18	.015
LVC		.12	.108	.09	.168

Boys N = 175

Girls N = 198



TABLE 13

CORRELATIONS BETWEEN MATURITY OF VOCATIONAL ATTITUDE (VDI) AND AGE, INTELLIGENCE, ACHIEVEMENT, SOCIO-ECONOMIC STATUS, AND LEVEL OF VOCATIONAL CHOICE FOR GRADE TEN MATRICULATION BOYS AND GRADE TEN NONMATRICULATION BOYS.

		Matriculation boys		Nonmatriculation boys	
		VDI	p	VDI	p
AGE	<u>r</u> = .05		.627	.26	.272
IQ		.15	.620	-.09	.736
Ach		.28	.019	.07	.786
SES		-.01	.976	.02	.941
LVC		.00	1.000	.61	.005
Matric N = 70		Nonmatric N = 20			



TABLE 14

CORRELATIONS BETWEEN MATURITY OF VOCATIONAL ATTITUDE (VDI) AND AGE, INTELLIGENCE, ACHIEVEMENT, SOCIO-ECONOMIC STATUS, AND LEVEL OF VOCATIONAL CHOICE FOR GRADE TEN MATRICULATION GIRLS AND GRADE TEN NONMATRICULATION GIRLS.

		Matriculation girls N = 57		Nonmatriculation girls N = 46	
		VDI	p	VDI	p
AGE	$\underline{r} =$	-.02	.875	-.09	.543
IQ		.09	.561	.19	.241
Ach		.23	.091	.26	.082
SES		-.18	.202	-.11	.508
LVC		-.09	.505	.38	.009



Question 6. Results for this question were obtained by means of the Chi Square test for significance between proportions. The question is concerned with the difference between the proportion of boys changing programs to that of girls changing programs. Also, the identification of the direction of change for those students who did change programs during high school.

Out of a total sample of 85 grade twelve boys, 19 changed programs while 66 did not. From a total of 95 grade twelve girls, 15 changed programs while 80 did not.

Results of the test for significance between proportions showed no significant difference between the proportion of boys changing programs to that of girls changing programs. The resulting Chi Square was 1.261, with 3.84 required for significance at the .05 level.

Table 15 shows a breakdown of direction of change and numbers of students changing programs.

Question 8. This question is concerned with the comparison of mean scores on the Attitude Test for students who did express a vocational choice and those who did not. Table 16 shows the numbers of students expressing a vocational choice and those who did not express a vocational choice.





TABLE 15

DIRECTION OF CHANGE IN PROGRAM TAKEN BY GRADE  
TWELVE STUDENTS SINCE FIRST REGISTERING IN  
GRADE TEN.

---

Direction of change	Girls	Boys
---------------------	-------	------

---

Matriculation to General	2	10
Matriculation to Business	2	2
General to Matriculation	2	4
General to Business	8	3
Business to Matriculation	0	0
Business to General	1	0

---



TABLE 16

NUMBERS OF STUDENTS, BY GRADE AND SEX,  
EXPRESSING A VOCATIONAL CHOICE AND THOSE  
NOT EXPRESSING A VOCATIONAL CHOICE.

---

	Choice	No choice
--	--------	-----------

---

Grade X boys	68	22
Grade X girls	81	22
Grade XII boys	65	20
Grade XII girls	85	10

---



In the comparison of mean scores on the Attitude Test, no significant difference was found between grade ten boys expressing a vocational choice and grade ten boys not expressing a vocational choice (table 17). Similarly, no significant difference was found between means on the Attitude Test for grade ten girls expressing a vocational choice and those not expressing a vocational choice (table 18).

Mean scores on the Attitude Test for grade twelve boys showed a significant difference between students who had made a vocational choice and those who had not made a choice (table 19). No significant difference was found between means for grade twelve girls (table 20).



TABLE 17

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN  
MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL  
DEVELOPMENT INVENTORY FOR GRADE TEN BOYS WHO  
EXPRESSED A VOCATIONAL CHOICE AND THOSE WHO  
DID NOT.

---

	Choice	No choice	t	p
--	--------	-----------	---	---

---

VDI	33.74	31.73	1.72	.089
-----	-------	-------	------	------

---

N = 90





TABLE 18

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN  
MEANS ON THE ATTITUDE TEST OF THE VOCATIONAL  
DEVELOPMENT INVENTORY FOR GRADE TEN GIRLS WHO  
EXPRESSED A VOCATIONAL CHOICE AND THOSE WHO  
DID NOT.

---

	Choice	No choice	t	p
<hr/>				
VDI mean	35.84	33.18	1.96	.061

---

N = 103



TABLE 19

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS  
ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT  
INVENTORY FOR GRADE TWELVE BOYS WHO EXPRESSED A  
VOCATIONAL CHOICE AND THOSE WHO DID NOT.

---

	Choice	No choice	t	p
--	--------	-----------	---	---

---

VDI mean	37.06	34.65	2.17	.033
----------	-------	-------	------	------

---

N = 85



TABLE 20

T-TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS  
ON THE ATTITUDE TEST OF THE VOCATIONAL DEVELOPMENT  
INVENTORY FOR GRADE TWELVE GIRLS WHO EXPRESSED A  
VOCATIONAL CHOICE AND THOSE WHO DID NOT.

---

	Choice	No choice	t	p
--	--------	-----------	---	---

---

VDI mean	39.68	37.30	1.80	.075
----------	-------	-------	------	------

---

N = 95



## CHAPTER V

## SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

The primary purpose of this study was to investigate the maturity of attitude toward vocational choice of students at different grade levels in high school. As well, a secondary purpose was to investigate the relationships of some variables associated with vocational maturity and the developmental process.

The basis for this study is the premise that since a developmental approach to educational-vocational planning means students 'grow' in understanding, then it is reasonable to suspect that students' level of vocational maturity should be higher for grade twelve students than it is for students at the grade ten level. If this is true, then it should follow that students at the grade twelve level are more capable of viewing their future more realistically, and are better able to look at and plan their future careers, than are grade ten students.





Comparisons of levels of maturity of attitude toward vocational choice were carried out between grade ten and grade twelve students randomly selected from a city high school. The Attitude Test of the Vocational Development Inventory (Crites, 1965a) was used as a measure of students' maturity of attitude toward vocational choice.

The Attitude Test is a 50 item True-False scale inquiring into students' involvement in, orientation toward, and preference for factors in vocational choice. It is also intended to investigate students' conceptions of vocational choice and their involvement in the process of choosing an occupation. The maximum score on the Attitude Test is 50.

Other variables which include age, intelligence, academic achievement, socio-economic status, and level of vocational choice, generally associated with the developmental process, were also investigated to determine their relationship to maturity of attitude toward vocational choice.

### Conclusions

Conclusions reached as a result of this study are,

- a. Students at the grade twelve level are more mature than grade ten students in their



- attitudes toward vocational choice.
- b. Students in a matriculation (university entrance) program are more mature in their attitudes toward vocational choice than are students in a nonmatriculation program.
  - c. Girls are more mature in their attitudes toward vocational choice than are boys in the same age and grade level.
  - d. The more intelligent students are more mature in their attitudes toward vocational choice than are the less intelligent students.
  - e. The higher academic achievers are more mature in their attitudes toward vocational choice than are the lower academic achievers.
  - f. Maturity of attitude toward vocational choice is not related to socio-economic status.
  - g. There is a significant relationship between maturity of attitude toward vocational choice and level of expressed vocational choice of students.

### Discussion and Implications

The author is aware that since this is a cross-sectional study, only assumptions can be made that present grade ten students will mature vocationally



to a level comparative to that of present grade twelve students during the next two years in high school. However, evidence indicates that the maturity level of students presently in grade ten will be significantly higher when these students are in the 12th grade.

If one accepts the concepts of the developmental approach, then it would not be surprising to find grade twelve students more vocationally mature than grade ten students, as was found in this study. These findings support similar findings reported by Crites (1969).

Studies reported by Crites (1969) show some variation between mean scores on the Attitude Test for students in different areas of The United States. For example, mean scores on the Attitude Test show grade ten students in Iowa were more vocationally mature than grade twelve students in both California and Tennessee. This would suggest some relationship between level of vocational maturity and surrounding environmental factors.

These findings reported by Crites (1969) indicate a possible need for a more comprehensive study in relation to this present study with samples being drawn from all high schools in the city. Findings would indicate the relationship between vocational maturity and area of residence. If differences were found this





would indicate where the greatest need lies for vocational counselling, and would also afford the opportunity for relating the vocational counselling approaches used in the schools by teachers and counsellors.

In reference to this study in particular, it would seem the next step would be to follow closely the development of present grade ten students during their next two years in high school to identify stages in their vocational development and to identify some factors presumably influencing their development. Further to this, it would be an opportune occasion to carry out much needed experimentation on different vocational counselling methods. Scores on the Attitude Test of the Vocational Development Inventory gained by this study could be the pre-test measuring vocational maturity. Control groups would be included and a post-test applied when these students are in grade twelve to enable comparisons to be made between different approaches used to facilitate vocational development.

A similar follow-up could be conducted for present grade twelve students to identify further maturity of vocational attitudes two or three years from now. At this time, these students should be established in an occupation or well along in furthering their education in a selected field.





Further findings of this study are in accord with those reported by Crites (1969) in that the more academically oriented students are also the more vocationally mature students. That is, students in a matriculation program are more vocationally mature than are students in a nonmatriculation program. With these results, it was not surprising to find as well that the higher achieving students also scored higher on the Attitude Test than did the lower achieving students. Similarly, the results that the more intelligent students are also more vocationally mature than less intelligent students are also in accord with findings of Super and Overstreet (1960) where these authors found the more intelligent students tend to think more seriously about their future and career selection.

From results of this, and other studies, it is quite evident that there is a great need for stronger emphasis on vocational counselling for the nonacademically minded student, the less intelligent student, and the lower achievers. In many instances, in this author's experience as a counsellor, the same student fits these three categories. These are the potential dropouts, and usually the ones most in need of finding a sense of worth and direction.

Further to these findings on achievement, intelligence, and program, it would seem there is need for further research on methods of identifying rate of vocational development of students who fall into the category



of potential dropout, low intelligence, low achiever, and/or taking a 'dead-end' type program of studies. Information of these influencing factors would aid both counsellor and teacher in planning and developing methods for facilitating vocational development for students of differing needs.

Results of this study that were unexpected by the author were findings that girls are more mature in their attitudes toward vocational choice than are boys. Since one would expect boys to be the most concerned with their futures with respect to careers in that they will be the future 'breadwinners' of the family, this does not seem to be so. The fact that girls are more mature vocationally may be the result of the trend today for girls to take a more active part in the world of work and hence being more concerned with entry into, and progress in future occupations. Similarly, it is accepted that girls tend to be developmentally ahead of boys during the adolescent years.

Further research should be conducted on a larger scale to find out if this is a general trend for girls to be more mature vocationally than boys, or whether this is just a localized condition for one area and school. It would seem that since the barrier of sex is being steadily broken down, and girls are being accepted into occupations formerly open to men only, there is a far



greater need for girls to become aware of the vast occupational opportunities open to them. There must also be provisions for facilitating vocational development and providing optimum positive conditions for decision-making on the part of girls as well as boys. The needs of girls with respect to vocational counselling should not be overlooked or treated lightly as is sometimes the case.

Findings from this study (as well as studies reported by Crites (1969)) show no significant positive relationship between vocational maturity and socio-economic status. Since this is essentially a comparison of attitudes only, it does not imply there is no need for further research on actual educational and vocational opportunities for students of lower social class.

In the experience of the author, as a counsellor talking with students supposedly on the lower end of the socio-economic scale, many set their vocational sights on an occupation higher in status than the occupational level of their father. These students are just as concerned with their future careers as are students of families of higher social class. Further studies could be conducted to identify possible opportunities and also barriers met by students from families with limited financial means and little influence.





When correlations were calculated between variables for students in the same grade and program, correlational findings were generally not significant. This is probably due to the fact that the smaller groups were homogeneous as compared to the heterogeneous make-up of the total sample. This would account for the difference in findings between the total sample and the smaller groups.

When attitude scores were compared for students who had expressed a vocational choice and those who were undecided, no significant difference was found in all cases with the exception of grade twelve boys. In this case, results showed grade twelve boys who had made a vocational choice were more vocationally mature than those who did not make a choice. Further research is needed here to determine if this is a general trend or whether it is a condition particular to this group.

Since nearly all occupations now require some form of training for entry (whether educational and/or vocational), preparation, in effect, begins upon entering high school. That is, in the selection of courses required by particular occupations.

From this, it would seem there is a need for more emphasis in the earlier grades on preparing students for careers in order to foster the vocational segment of the whole developmental process. That is, helping students





become aware of such things as the relationship between education and occupational opportunities, entry into occupations, worker traits, the broad areas or clusters of occupations, and most important, encouraging the student to look at himself in relation to his needs and abilities and the demands of particular occupations.

The implication here is that there should be a great deal of co-operation between counsellor and teacher to provide optimal vocational counselling not only at the senior high school level, but at the junior high and elementary levels as well.

This study also suggests the need to identify students' vocational maturity level in order to facilitate more meaningful instruction on the part of teachers in relating class work to occupational needs, and also to aid counsellors in identifying student needs during particular stages of their development.

Further implications indicated by results of this study are,

- a. A need for more counselling services at the junior high and elementary levels.
- b. Further research on factors influencing students' vocational development and vocational choice (e.g. parental influence, peer influence, exposure to occupations, etc.).



- c. A need for close co-operation between junior high school and senior high school personnel in preparing students for educational decision-making tasks.
- d. A need for classroom teachers to develop interest in students by relating classroom work to occupations.
- e. A need for more emphasis by counsellors on vocational counselling.
- f. More concern with vocational counselling for those students who do poorly academically and are sometimes the potential dropouts.



## SELECTED REFERENCES

- Asbury, F.A. Vocational development of rural disadvantaged eighth-grade boys. Vocational Guidance Quarterly, 1968, 17, 109-113.
- Astin, H.S. Stability and change in the career plans of ninth grade girls. Personnel and Guidance Journal, June, 1968, 961-966.
- Bartlett, W.E. Vocational maturity and personality variables of manpower trainees. Vocational Guidance Quarterly, 1968, 17, 104-108.
- Bonjean, C.M.; Hill, R.J. and McLemore, S.D. Sociological Measurement, San Francisco, Chandler Publishing Co., 1967.
- Borow, H. and Wrenn, G.C. Preface in Borow, H. (Ed) Man in a world at work. Boston, Houghton Mifflin, 1964.
- Caplow, T. The sociology of work. Minneapolis, The University of Minnesota Press, 1954.
- Cass, J.C. and Tiedeman, D.V. Vocational development and the election of a high school curriculum. Personnel And Guidance Journal, March, 1960, 538-545.
- Crites, J.O. Measurement of vocational maturity in adolescence: Attitude test of the vocational development inventory. Psychological Monographs: General and applied. 79, 2, Whole No. 595, 1965 (a).
- Crites, J.O. Research frontier: The vocational development project at the University of Iowa. Journal of Counseling Psychology, 12, 1, 1965 (b).
- Crites, J.O. and Semler, I.J. Adjustment, educational achievement, and vocational maturity as dimensions of development in adolescence. Journal of Counseling Psychology, 1967, 14, 489-496.



- Crites, J.O. The maturity of vocational attitudes in adolescence. Iowa, Author, 1969.
- Cronbach, L.J. Essentials of psychological testing. (2nd. ed.) New York, Harper and Row, 1960.
- Dressel, P.L. Helping pupils with their problems. in Erickson, C.E. (Ed.) A basic text for guidance workers. New York, Prentice-Hall, 1947.
- Erickson, C.E. A basic text for guidance workers. New York, Prentice-Hall, 1947.
- Ferguson, G.A. Statistical analysis in psychology and education. New York, McGraw-Hill, 1959.
- Ginsberg, E., Ginsberg, S., Axelrod, S. and Herma, J. Occupational choice. New York, Columbia University Press, 1964.
- Ginsberg, E. and Herma, J. Talent and performance. New York, Columbia University Press, 1964.
- Ginsberg, E. Paper presented at the Canadian Guidance and Counselling Conference, Niagara Falls, October, 1965.
- Goldman, L. Using tests in counseling. New York, Appleton-Century-Crofts, 1961.
- Gribbons, W.D. Changes in readiness for vocational planning from the eighth to tenth grade Personnel And Guidance Journal, May, 1964, 908-913.
- Gribbons, W.D. and Lohnes, P.R. Shifts in adolescents vocational values. Personnel And Guidance Journal, Nov. 1964, 248-252.
- Halpern, G. and Norris, L. Student curriculum decisions. Personnel And Guidance Journal, Nov. 1968, 240-243.
- Havinghurst, R.J. Human development and education. New York, Longmans Green, 1953.







- Hershenson, D.B. Life-stage vocational development system. Journal Of Counseling Psychology, 1968, 15, 1, 23-30.
- Hershenson, D.B. Techniques for assisting life stage vocational development. Personnel And Guidance Journal, April, 1969, 776-780.
- Hoel, P.G. Elementary statistics. (2nd ed.) New York, John Wiley, 1960.
- Holland, J.L. A theory of vocational choice. Journal Of Counseling Psychology, 1959, 6, 1, 35-43.
- Hollender, J.W. Development of a realistic vocational choice. Journal of Counseling Psychology, 1967, 4, 314-318.
- Hollingshead, A.B. and Redlich, F.C. Social class and mental illness: A community study. New York, John Wiley, 1958.
- Ivey, A.E. and Morrill, W.H. Career process: A new concept for vocational behavior. Personnel And Guidance Journal, March, 1968, 644-649.
- Katz, M. Decisions and values: A rationale for secondary school guidance. College Entrance Examination Board, Princeton, 1963.
- Miller, D.C. and Form, W.H. Industrial Sociology. New York, Harper and Row, 1951.
- Miller, D.C. Industry and the worker. in Borow, H. (Ed.) Man in a world at work. Boston, Houghton Mifflin Co., 1964.
- O'Hara, R.P. and Tiedeman, D.V. Vocational self concept in adolescence. Journal of Counseling Psychology, 1959, 6, 4, 292-301.
- O'Hara, R.P. A theoretical foundation for the use of occupational information in guidance. Personnel And Guidance Journal, March 1968, 636-640.
- Remers, H.H. and Radler, D.H. The american teenager. New York, Charter Books, The Bobbs-Merrill Co. 1957.



- Roeber, E.C. The school curriculum and vocational development. Vocational Guidance Quarterly, Winter, 1965-66, 87-91.
- Roe, A. The psychology of occupations. New York, John Wiley, 1956.
- Roe, A. Personality structure and occupational behavior. in Borow, H. (Ed.) Man in a world at work. Boston, Houghton Mifflin Co., 1964.
- Sullivan, E.T., Clark, W.W., and Tiegs, E.W. California short-form test of mental maturity manual. Los Angeles, California Test Bureau, 1957.
- Super, D.E. The psychology of careers: An introduction to vocational development. New York, Harper Brothers, 1957.
- Super, D.E., and Overstreet, P.L. The vocational maturity of ninth-grade boys. New York, New York Bureau Of Publications, Teachers College, Columbia University, 1960.
- Super, D.E. Consistency and wisdom of vocational preference as indices of vocational maturity in the ninth grade. Journal Of Educational Psychology, 1961, 52, 1, 35-43.
- Thoresen, C.E., and Mehrens, W.A. Decision theory and vocational counseling: Important concepts and questions. Personnel And Guidance Journal, Oct. 1967, 167-172.
- Tiedeman, D.V. Decision and vocational development: A paradigm and its implications. Personnel And Guidance Journal, Sept. 1961, 15-21.
- Vriend, J. Vocational maturity ratings of inner-city high school seniors. Journal Of Counseling Psychology, 1969, 16, 5, 377-384.
- Wrenn, G.C. The counselor in a changing world. The commission on guidance in american schools: American Personnel And Guidance Association. Washington, D.C., 1962.
- Wurtz, R.E. Vocational development: Theory and practice. Vocational Guidance Quarterly, Dec. 1966, 127-130.



## APPENDICES



## APPENDIX A





## THE QUESTIONNAIRE

The information from this questionnaire is for the purpose of a research paper being written to help counsellors in the understanding of students' selection of future careers. Please answer all questions with sincerity so that this survey may be successful.

PLEASE ANSWER ALL QUESTIONS IN SECTION I BEFORE GOING ON TO SECTION II.

## SECTION I.

1. Name \_\_\_\_\_.
2. Age \_\_\_\_ Grade \_\_\_\_ Sex (male) \_\_\_\_ (female) \_\_\_\_.
3. Your program (e.g. matric, business, general)  
\_\_\_\_\_.
4. When you planned your grade ten program, what future vocation were you planning for? \_\_\_\_\_.
5. Have you changed your program in any way since first registering in grade ten? Yes \_\_\_\_ No \_\_\_\_.
6. If your answer to the above question is yes, please list the changes made. \_\_\_\_\_.



7. Do you plan on completing high school?  
Yes \_\_\_\_ No \_\_\_\_.
8. Do you plan on furthering your education beyond high school? Yes \_\_\_\_ No \_\_\_\_.
9. If you plan on furthering your education beyond high school, do you plan to enter -  
University of Alberta \_\_\_\_\_. If so, what field of study? \_\_\_\_\_.  
University of \_\_\_\_\_ Field of study \_\_\_\_\_.  
Technical school such as NAIT \_\_\_\_\_. Field of study \_\_\_\_\_.  
Business College \_\_\_\_\_.  
Any other educational institution \_\_\_\_\_.  
Field of study \_\_\_\_\_.
10. If you do not intend finishing high school, and plan on going to work, what type of work would you most like to get? \_\_\_\_\_.
11. If you intend to finish high school then go right to work, what kind of job would you most like to get? \_\_\_\_\_.
12. What is your father's occupation? (Be as specific as possible as to type of work) \_\_\_\_\_.



13. What level of education did your father attain?  
(Mark an X in front of the appropriate statement  
below.)

\_\_\_\_\_ Less than grade seven.  
\_\_\_\_\_ Between grade seven and grade nine.  
\_\_\_\_\_ Between grade ten and grade eleven.  
\_\_\_\_\_ High school graduate.  
\_\_\_\_\_ Between one to three years university  
(or business school).  
\_\_\_\_\_ University graduate.  
\_\_\_\_\_ University graduate studies (beyond a  
Bachelor's degree).



## APPENDIX B





## SECTION II

## VOCATIONAL DEVELOPMENT INVENTORY

## ATTITUDE SCALE

## FORM IV

Directions

There are a number of statements about occupational choice and work listed in this booklet. Occupational choice means the kind of job that you think you will probably be doing when you finish all your schooling.

If you agree or mostly agree with the statement, use your pencil to blacken the circle in the column headed T on the separate answer sheet. If you disagree or mostly disagree with the statement, blacken the circle in the column headed F on the answer sheet. Be sure your marks are heavy and black. Erase completely any answer you wish to change.

1. Once you choose a job, you can't choose another one.
2. In order to choose a job, you need to know what kind of a person you are.
3. I plan to follow the line of work my parents suggest.
4. I guess everybody has to go to work sooner or later, but I don't look forward to it.



5. A person can do any kind of work he wants as long as he tries hard.
6. I'm not going to worry about an occupation until I'm out of school.
7. Your job is important because it determines how much you can earn.
8. Work is worthwhile mainly because it lets you buy the things you want.
9. The greatest appeal of a job to me is the opportunity it provides for getting ahead.
10. I often daydream about what I want to be, but I really haven't chosen a line of work yet.
11. Knowing what you are good at is more important than knowing what you like in choosing an occupation.
12. Your parents probably know better than anybody which occupation you should enter.
13. If I can just help others in my work, I'll be happy.
14. Work is dull and unpleasant.
15. Everyone seems to tell me something different, until now I don't know which kind of work to choose.
16. I don't know how to go about getting into the kind of work I want to do.
17. Why try to decide upon a job when the future is so uncertain.
18. I spend a lot of time wishing I could do work that I know I cannot ever possibly do.
19. I don't know what courses I should take in school.
20. It's probably just as easy to be successful in one occupation as it is in another.
21. By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.



22. There are so many things to consider in choosing an occupation, it is hard to make a decision.
23. I seldom think about the job I want to enter.
24. It doesn't matter which job you choose as long as it pays well.
25. You can't go very far wrong by following your parents' advice about which job to choose.
26. Working is much like going to school.
27. I am having difficulty in preparing myself for the work I want to do.
28. I know very little about the requirements of jobs.
29. The job I choose has to give me plenty of freedom to do what I want.
30. The best thing to do is to try out several jobs, and then choose the one you like best.
31. There is only one occupation for each person.
32. Whether you are interested in a particular kind of work is not as important as whether you can do it.
33. I can't understand how some people can be so set about what they want to do.
34. As long as I can remember I've known what kind of work I want to do.
35. I want to really accomplish something in my work - to make a great discovery or earn lots of money or help a great number of people.
36. You get into an occupation mostly by chance.
37. It's who you know, not what you know, that's important in a job.
38. When it comes to choosing a job, I'll make up my own mind.
39. Choose an occupation which gives you a chance to help others.





40. When I am trying to study, I often find myself daydreaming about what it will be like when I start working.
41. I have little or no idea of what working will be like.
42. Choose an occupation, then plan how to enter it.
43. I really can't find any work that has much appeal to me.
44. Choose a job in which you can someday become famous.
45. If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.
46. Choose a job which allows you to do what you believe in.
47. The most important part of work is the pleasure which comes from doing it.
48. I keep changing my occupational choice.
49. As far as choosing an occupation is concerned, something will come along sooner or later.
50. Why worry about choosing a job when you don't have anything to say about it anyway.

Scoring Key to the Attitude Test of the VDI.

All items are scored "False" for the more vocationally mature response, except items 2, 22, 38, 42, 45, 46, and 47, which are scored "True".





## APPENDIX C



## TWO-FACTOR INDEX OF SOCIAL POSITION

August B. Hollingshead

The Two-Factor Index utilizes occupation and education. These two factors are scaled and weighted individually and a single score is obtained.

Occupational position has a factor weight of 7 and the educational position a factor weight of 4. These weights are multiplied by the scale value for education and occupation of each individual. The calculated weight score gives the approximate position on the family on the overall scale.

When the index of social position is calculated, the individual may be stratified either on a continuum of scores or into a 'class'.

The range of scores in each class is,

<u>Class</u>	<u>Range of scores</u>
I	11 - 17
II	18 - 31
III	32 - 47
IV	48 - 63
V	64 - 77



## TWO-FACTOR INDEX OF SOCIAL POSITION

August B. Hollingshead

Educational scale

Years of school completed.	scale value
Professional (Masters or Doctorate degree)	1
Bachelor's degree	2
1-3 years college	3
High school graduate	4
10-11 years of school	5
7-9 years of school	6
Under 7 years of school	7

Occupational scale

1. Higher executives of large concerns, proprietors,  
and major professionals.

- A. Higher Executives (Value of corporation \$500,000 and  
above as rated by Dun and Bradstreet)

Bank	Business
Presidents	Vice-presidents
Vice-presidents	Assis. Vice-presidents
Assistant Vice-presidents	Executive secretaries
Business	Research directors
Directors	Treasurers
Presidents	

- B. Proprietors (Value over \$100,000 by Dun and Bradstreet)

Brokers	Farmers
Contractors	Lumber dealers
Dairy owners	



## C. Major professionals

Accountants (CPA)	Military: Commissioned
Actuaries	officers, major and above
Agronomists	Government officials (all
Architects	levels of Government)
Artists, portrait	Physicians
Astronomers	Physicists, Research
Auditors	Psychologists, practicing
Bacteriologist	Symphony conductor
Chemical engineer	Teachers, university, college
Chemist	Veterinarian
Clergymen (Professional trained)	
Dentists	
Economists	
Engineers (College graduates)	
Foresters	
Geologists	
Judges (Superior courts)	
Lawyers	
Metallurgists	

## 2. Business Managers, Proprietors of medium-sized businesses, and lesser professionals.

## A. Business managers in large concerns (Value, \$500,000)

Advertising directors	Manufacturers represent-
Branch managers	atives
Brokerage Salesmen	Office managers
Directors of purchasing	Personnel managers
District managers	Police Chief: Sheriff
Executive assistants	Postmaster
Export managers	Production managers
Farm managers	Sales engineers
Government officials (minor)	Sales managers, National concerns
	Store managers





B. Proprietors of medium businesses (Value \$35,000-\$100,000)

Advertising	Jewelers
Clothing store	Poultry business
Contractors	Real Estate broker
Express company	Rug business
Farm owners	Store
Fruits, wholesale	Theatre
Furniture business	

C. Lesser Professionals

Accountants (not CPA)	Musicians: Symphony
Chiropodists	Nurses
Chiropractors	Opticians
Correction officers	Optometrists, D.O.
Director of Community house	Pharmacists
Engineers (not university graduates)	Public Health officers
Finance writer	Research assistants, University
Health educators	Social workers
Labor relations consultants	
Librarians	
Military: commissioned officers	
Lieutenant, Captain	

3. Administrative personnel, Owners of small businesses, and minor professionals.

A. Administrative personnel

Advertising agents	Section heads, all levels of government
Chief clerks	Section heads, large business and industry
Credit managers	Service managers
Insurance agents	Shop managers
Managers, departments	Store managers, chain
Passenger agents, railroad	Traffic managers
Private secretaries	
Purchasing agents	
Sales representatives	



## B. Small business owners (\$6,000-\$35,000)

Art gallery	Furniture
Auto accessories	Garage
Awnings	Gas station
Bakery	Glassware
Beauty shop	Grocery
Boatyard	Hotel proprietors
Brokerage, insurance	Jewelry
Car dealers	Machinery brokers
Cattle dealers	Manufacturing
Cigarette machines	Monuments
Cleaning shops	Music
Clothing	Pain contracting
Coal business	Poultry
Contracting businesses	Real Estate
Decorating	Records and radios
Dog supplies	Restaurant
Dry goods	Roofing contractor
Engraving business	Shoe
Feed	Signs
Finance companies	Tavern
Fire extinguishers	Taxi company
Five and Dime	Tire shop
Florist	Trucking
Food equipment	Upholstery
Foundry	Wholesale outlet
Funeral directors	

## C. Semiprofessionals

Actors and showmen	Oral hygienists
Army, Master Sergeant	Physiotherapists
Artists, commercial	Piano teachers
Appraisers (estimators)	Publicity and public
Clergymen (not profess-	relations
ionally trained)	Radio TV announcer
Concern managers	Reporters
Deputy Sheriffs	Surveyors
Dispatchers, railroad	Title searchers
Interior decorators	Tool designers
Interpreters, court	Travel agent
Laboratory assistants	Yard master, railroad
Landscape planners	
Morticians	
Navy, Chief Petty Officer	

## D. Farm owners (\$20,000-\$35,000)



4. Clerical and sales workers, Technicians, and owners of little businesses (under \$6,000)

A. Clerical and sales workers

Bank clers and tellers	Route managers
Bill collectors	Sales clerks
Bookkeepers	Sergeants and petty officers
Business machine operators	Shipping clerks
Claims examiners	Supervisors, utilities, factories
Clerical or stenographic	Supervisors, toll stations
Conductors, railroad	
Factory storekeepers	
Factory supervisors	
Post office clerks	

B. Technicians

Dental technicians	Proofreaders
Draftsmen	Safety supervisors
Driving teachers	Supervisors of maintenance
Expeditor, factory	Technical assistants
Experimental tester	Telephone company supervisors
Instructors, telephone company, factory	Timekeepers
Inspectors, weights, sanitary, railroad, factory	Tower operators, railroad
Investigators	Truck dispatchers
Laboratory technicians	Window trimmers
Locomotive engineers	
Operators PBX	

C. Owners of little businesses (\$3,000-\$6,000)

Flower shop	News stand
Grocery	Tailor shop

D. Farmers      Owners      (value \$10,000-\$20,000)



## 5. Skilled manual employees

Auto body repairers	Mechanics (trained)
Bakers	Millwrights
Barbers	Moulders (trained)
Blacksmiths	Painters
Bookbinders	Paperhangers
Boilermakers	Patrolmen, railroad
Brakemen, railroad	Pattern and model makers
Brewers	Piano builders
Bulldozer operators	Piano tuners
Butchers	Plumbers
Cabinet makers	Policement, city
Cable splicers	Postmen
Carpenters	Printers
Casters (founders)	Radio TV maintenance
Cement finishers	Repairmen, home appliance
Cheese makers	Rope splicers
Chefs	Sheetmetal workers (trained)
Compositors	Shipsmiths
Diemakers	Shoe repairmen
Diesel engin repair	Stationary engineers
Diesel shovel operators	(licensed)
Electricians	Stewards, club
Engravers	Switchmen, railroad
Exterminators	Tailors (trained)
Firemen, city	Teletype operators
Firemen, railroad	Tool makers
Fitters, gas, steam	Track supervisors, railroad
Foremen	Tractor-trailer trans.
Gardeners, landscape	Typographers
Glass blowers	Upholsterers (trained)
Glaziers	Watchmaker
Gunsmiths	Weavers
Gauge makers	Welders
Hair stylists	Yard supervisors, railroad
Heat treaters	
Horticulturists	
Linemen, utility	
Linotype operators	
Lithographers	
Locksmiths	
Loom fixers	
Machinists	
Maintenance foremen	
Linoleum layers (trained)	
Masons	
Masseurs	







## 6. Machine operators and Semiskilled employees

Aides, hospital	Roofers
Apprentices, electricians, printers, steam fitters, tool makers	Set-up men, factories
Assembly line workers	Shapers
Bartenders	Signal men, railroad
Bingo tenders	Solderers, factory
Building superintendents construction	Sprayers, paint
Bus drivers	Steel workers
Checkers	Stranders, wire machines
Coin machine fillers	Strippers, rubber factory
Cooks, short order	Taxi drivers
Deliverymen	Testers
Dressmakers, machine	Timers
Elevator operators	Tire molders
Military, enlisted men	Trainmen, railroad
Filers, sanders, buffers	Truck drivers (general)
Foundry workers	Waiter, waitresses
Garage and gas station attendants	Weighers
Greenhouse workers	Welders, spot
Guards, doorkeepers, watchmen	Winders, machine
Hairdressers	Wiredrawers, machine
Housekeepers	Wine bottlers
Meat cutters and packers	Woodworkers, machines
Meter readers	Wrappers, stores and factories
Operators, factory machines	
Oilers, railroad	
Practical nurses	
Pressers, clothing	
Pump operators	
Receivers and checkers	

Farmers      Smaller tenant who own little equipment.

## 7. Unskilled employees

Amusement park workers	Dairy workers
Ash removers	Deck hands
Attendants, parking lot	Domestics
Cafeteria workers	Fishermen, clam diggers
Car Cleaners, railroad	Freight handlers
Carriers, coal	Garbage collectors
Counter men	Grave diggers



Hod carriers  
Hog killers  
Hospital workers, unspecified  
Hostlers, railroad  
Janitors, sweepers  
Laborers, Construction  
Laborers, unspecified  
Laundry workers  
Messengers  
Platform men, railroad  
Peddlers  
Porters  
Relief, private, public  
Roofer's helpers  
Shirt folders  
Shoe shiners  
Sorters, rag and salvage  
Stage hands  
Stevedores  
Stock handlers  
Street cleaners  
Struckmen, railroad  
Unemployed (no occupation)  
Unskilled factory workers  
Waitresses (has houses)  
Washers, cars  
Window cleaners  
Woodchoppers









**B29956**